

Fig. 1  
(Prior Art)

Swept volume  
Constructed from the generated traces of the motion of a subset of  
edges bounded by the subset of triangles  
(Dashed: rejected / Solid: kept)

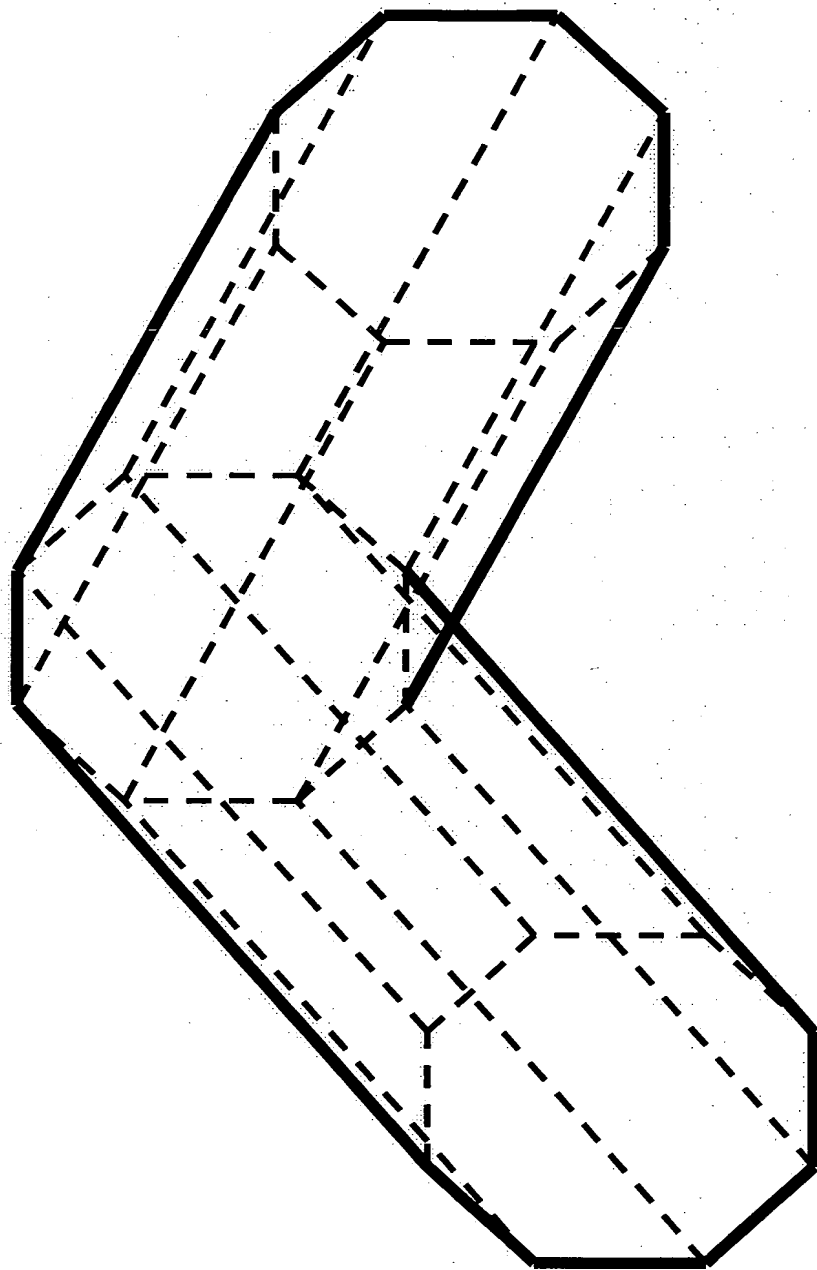


Fig. 2

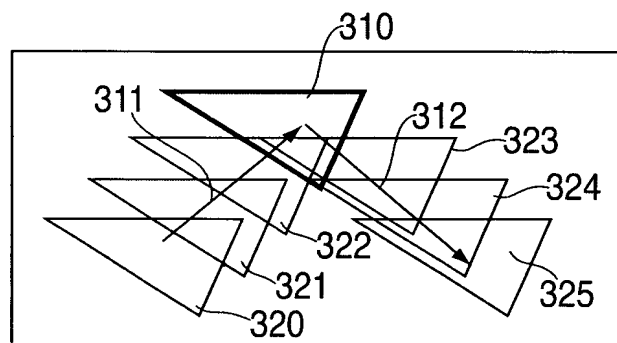


FIG. 3

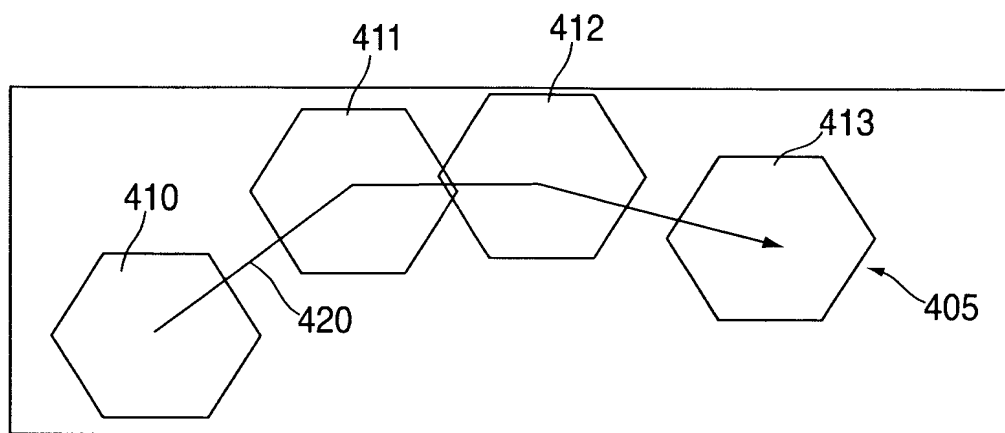


FIG. 4

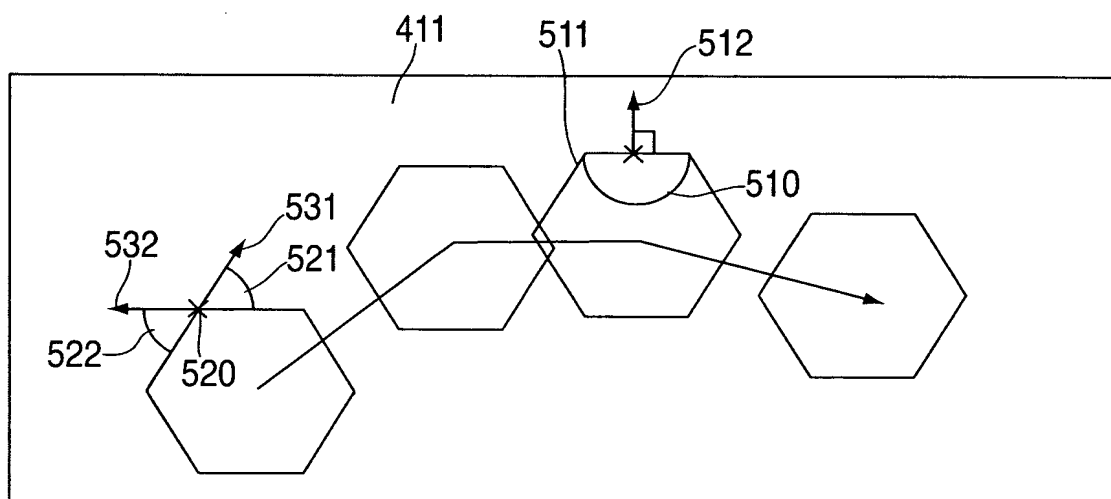


FIG. 5

First example, translation

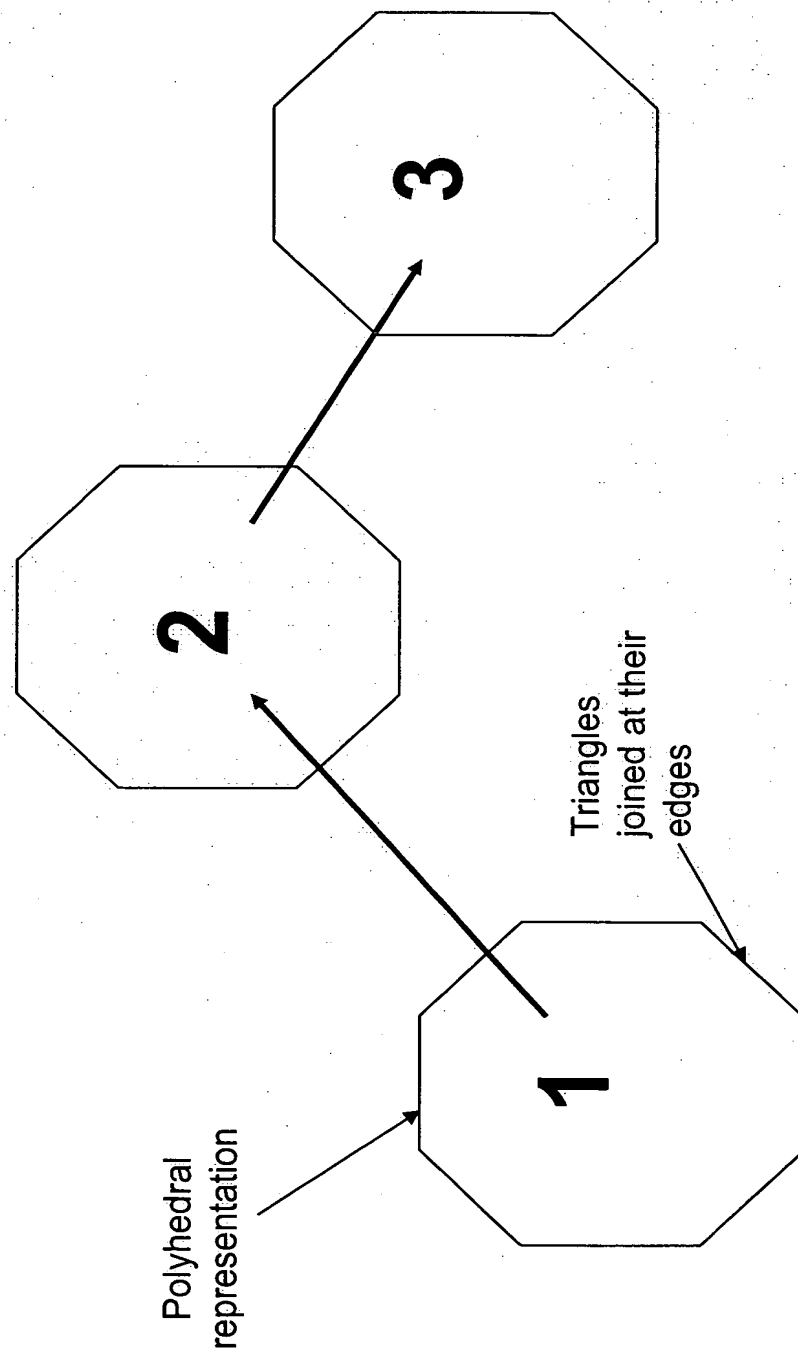


Fig. 6A

Selection of edges and their traces  
in first zone

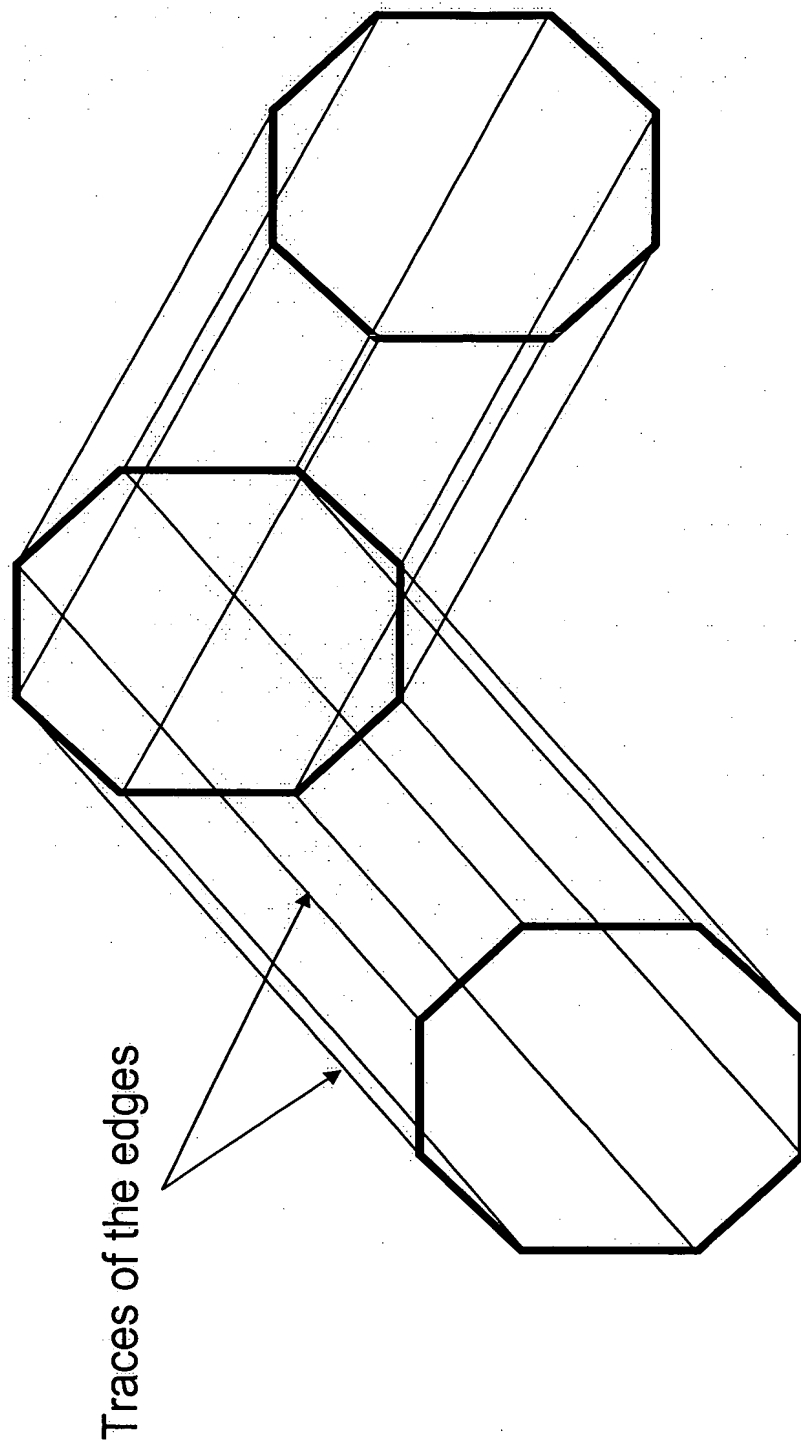


Fig. 6B

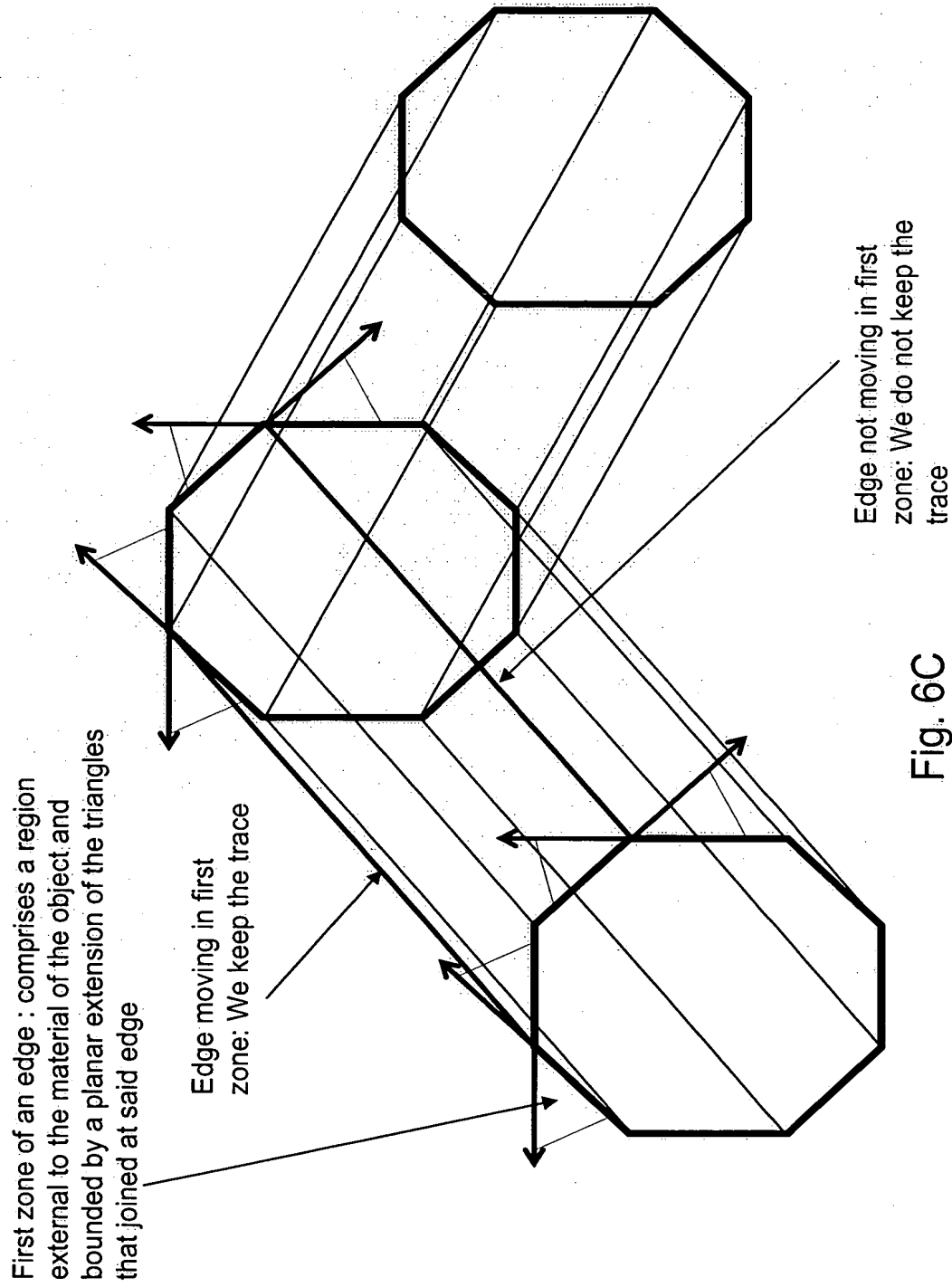
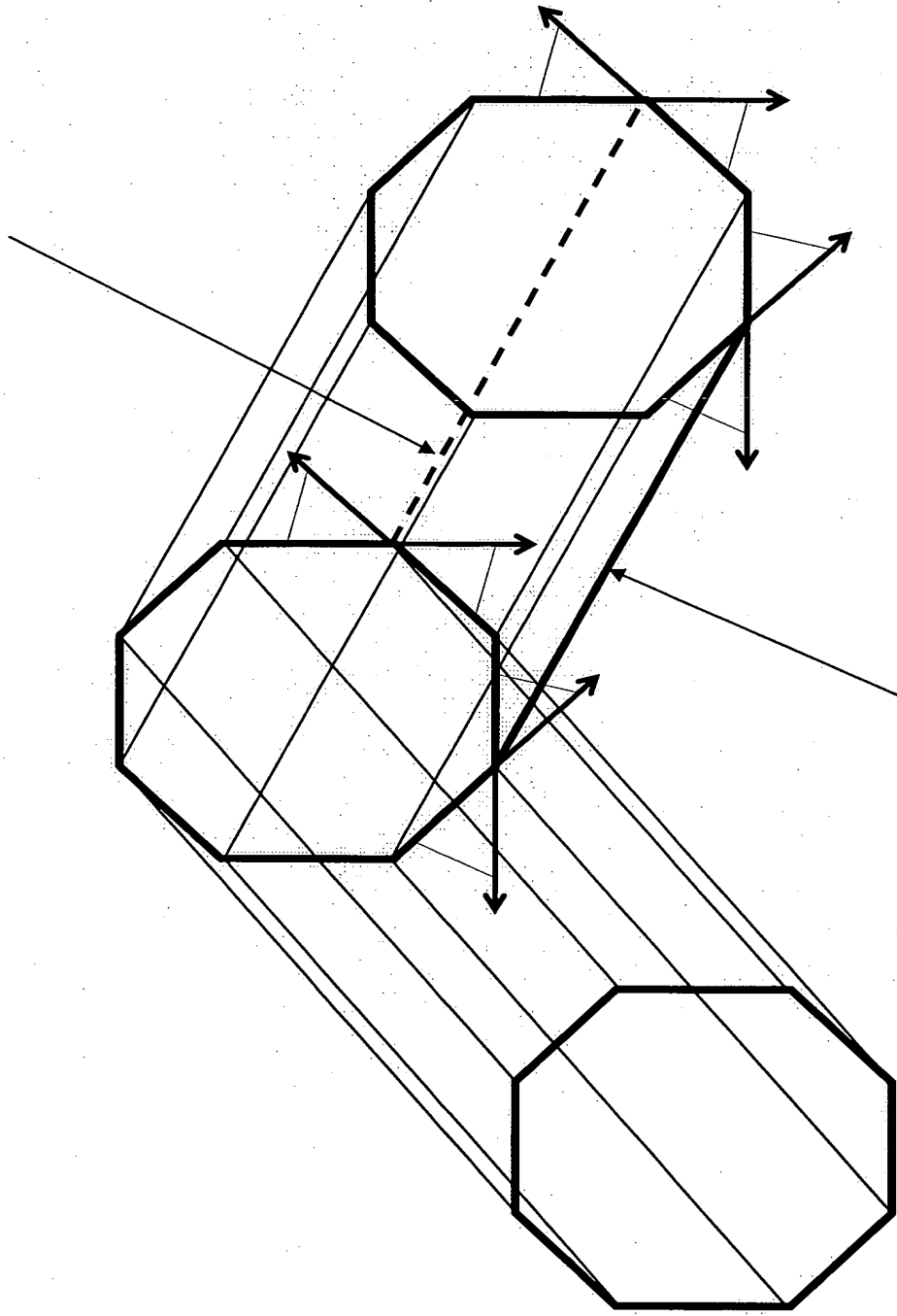


Fig. 6C

Edge not moving in first zone:  
We do not keep the trace



Edge moving in first zone:  
We keep the trace

Fig. 6D



Resulting set of kept traces  
In solid, generated traces of the motion of the subset of edges

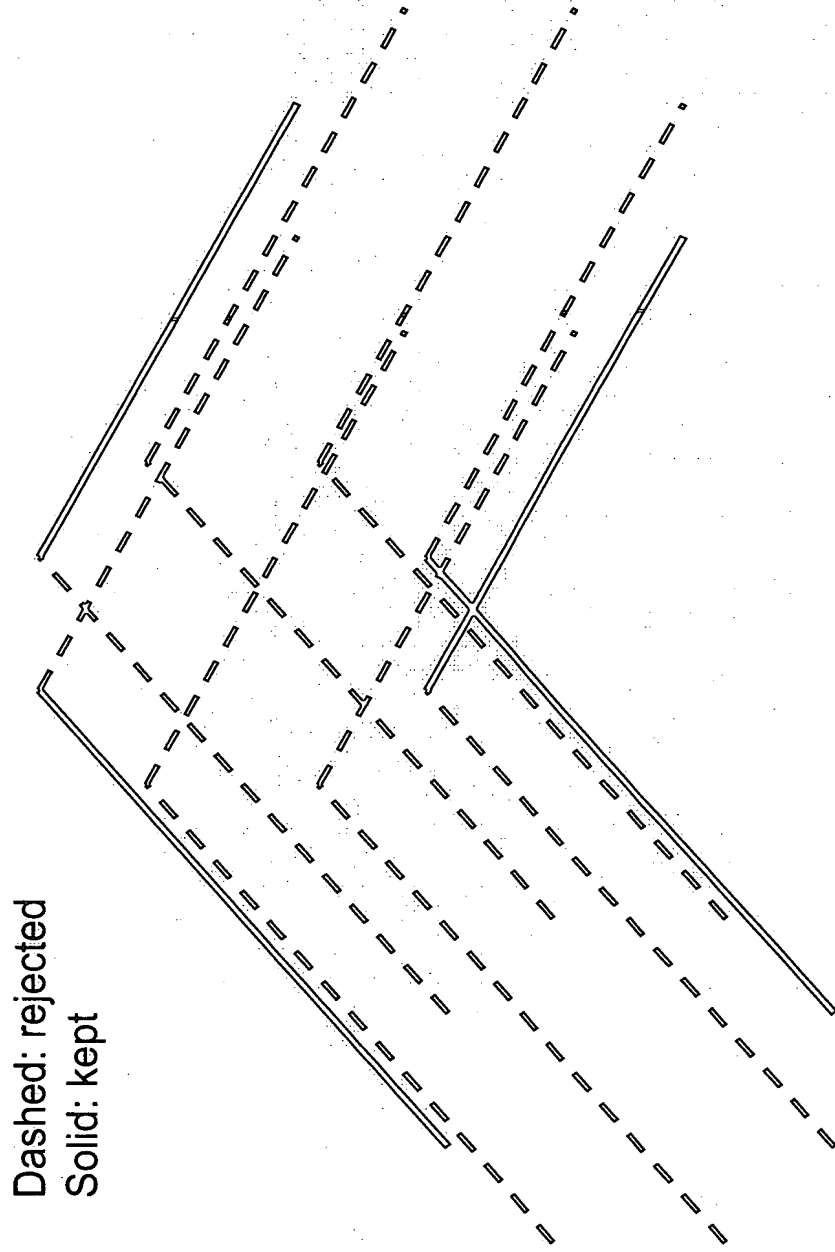


Fig. 6E

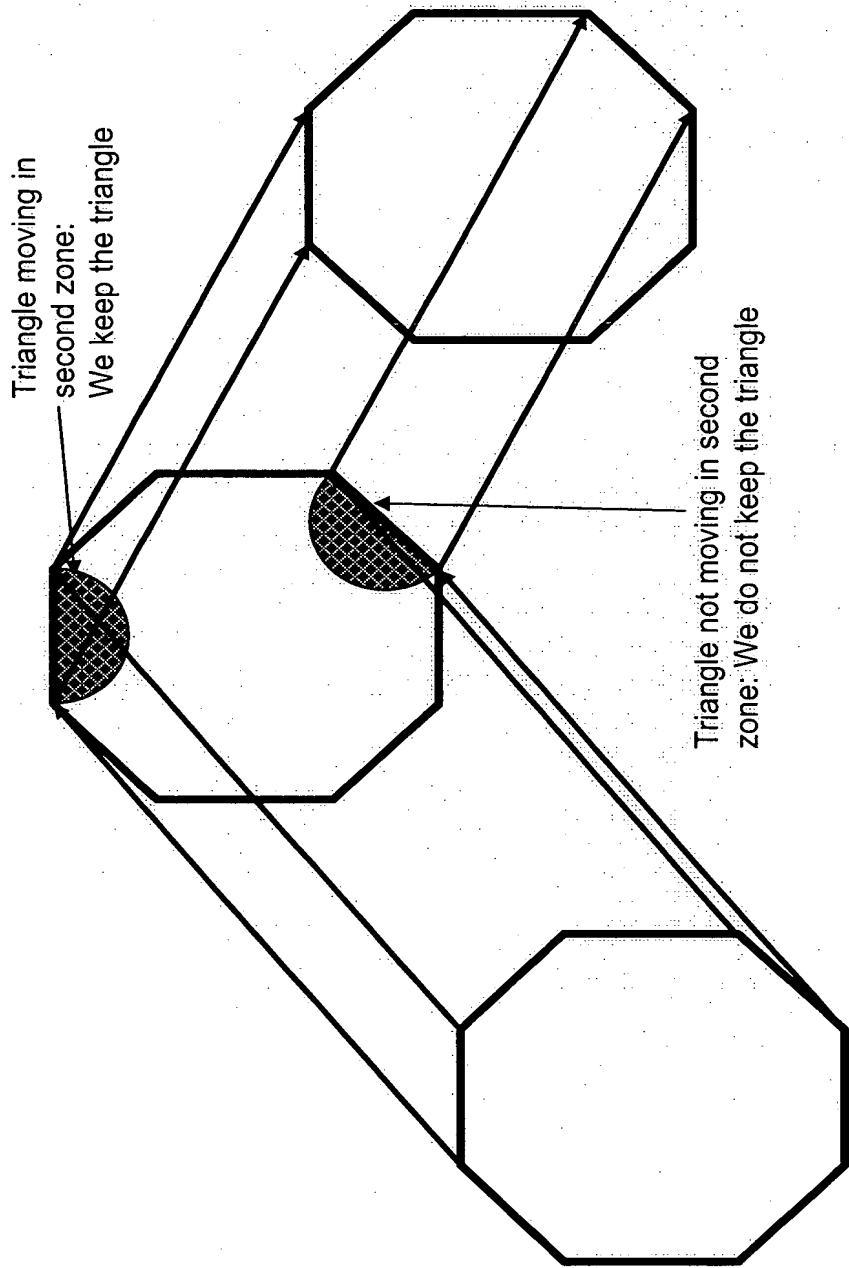


Fig. 6F

## Selection of triangles moving in second zone

### Second zone of a triangle

(half sphere comprising a flat face that is planar with said triangle and extending interior to the modeled object)

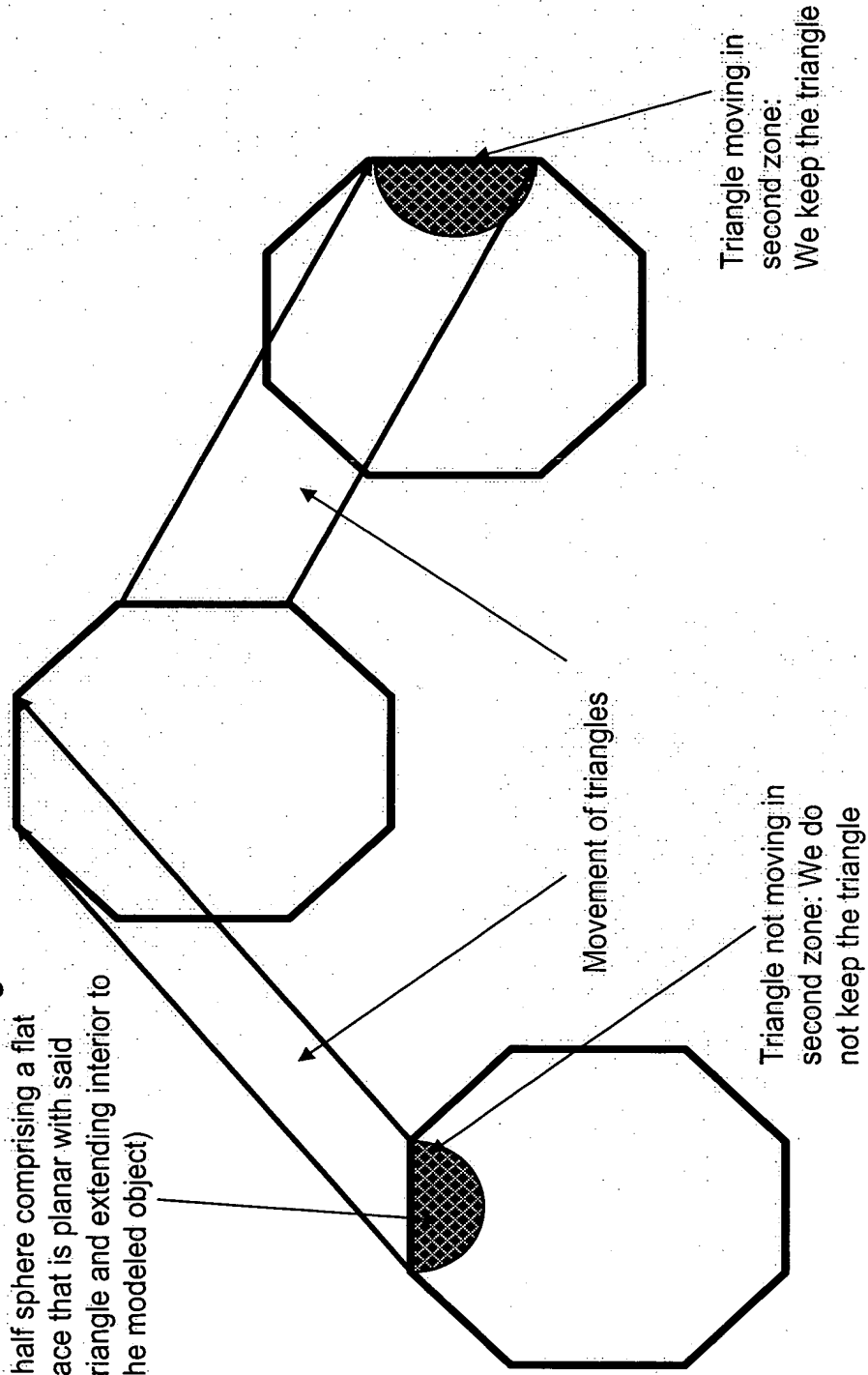


Fig. 6G

Resulting set of kept triangles:  
Red: rejected  
Solid: kept

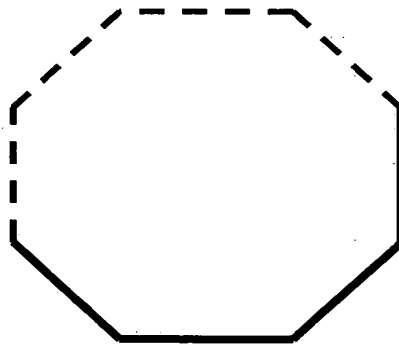
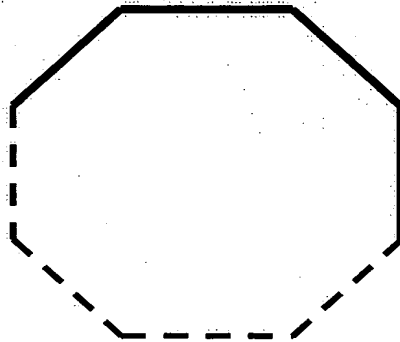
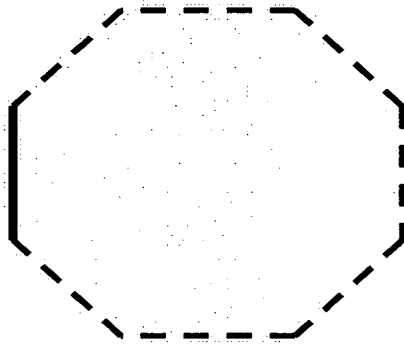


Fig. 6H

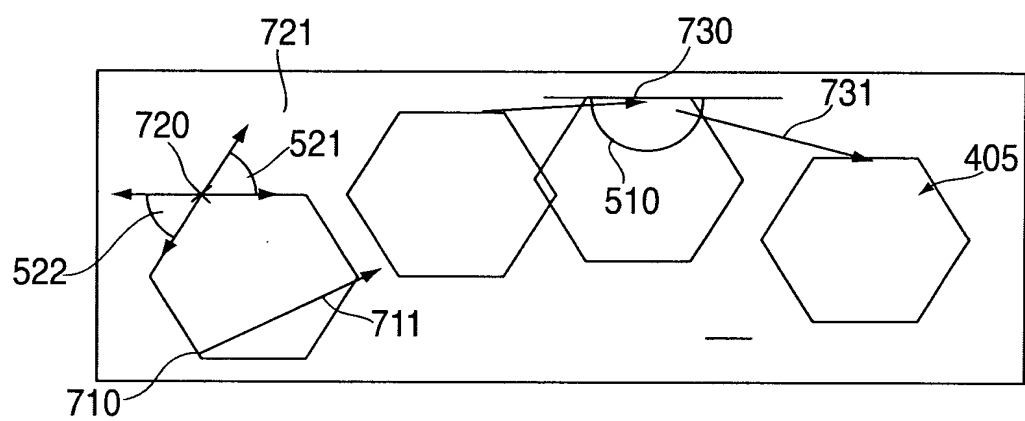


FIG. 7

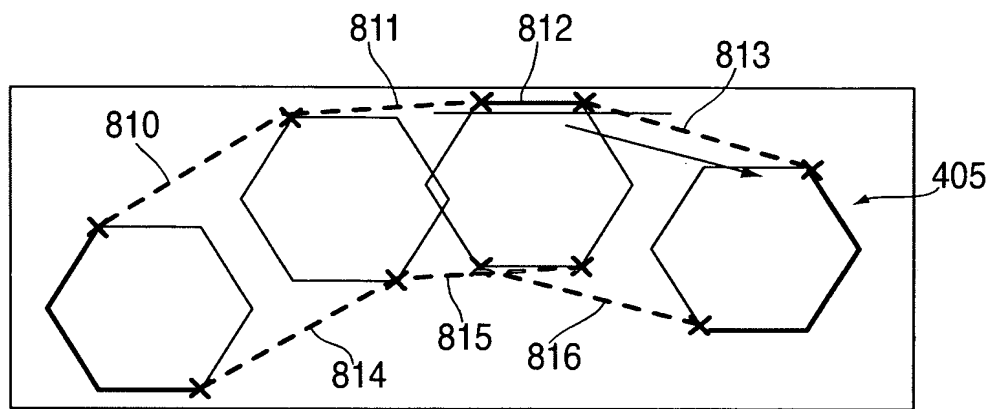


FIG. 8

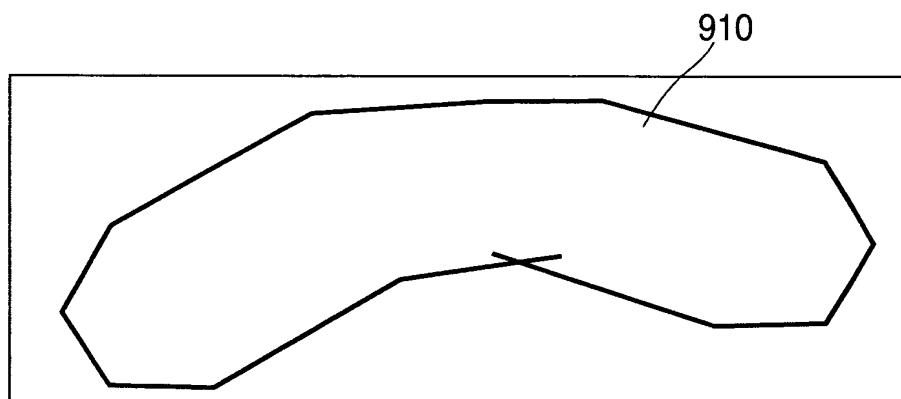


FIG. 9

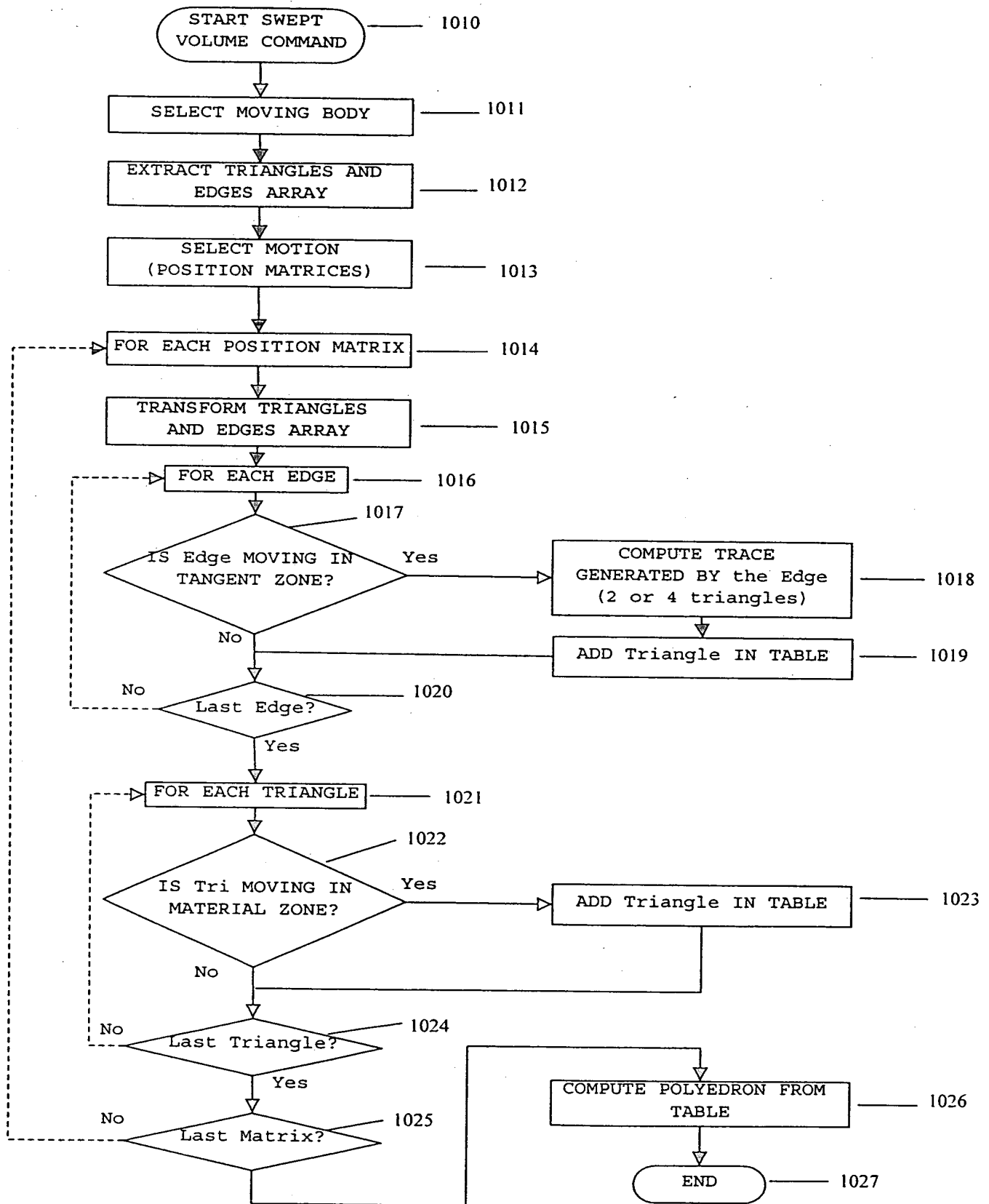


Fig. 10

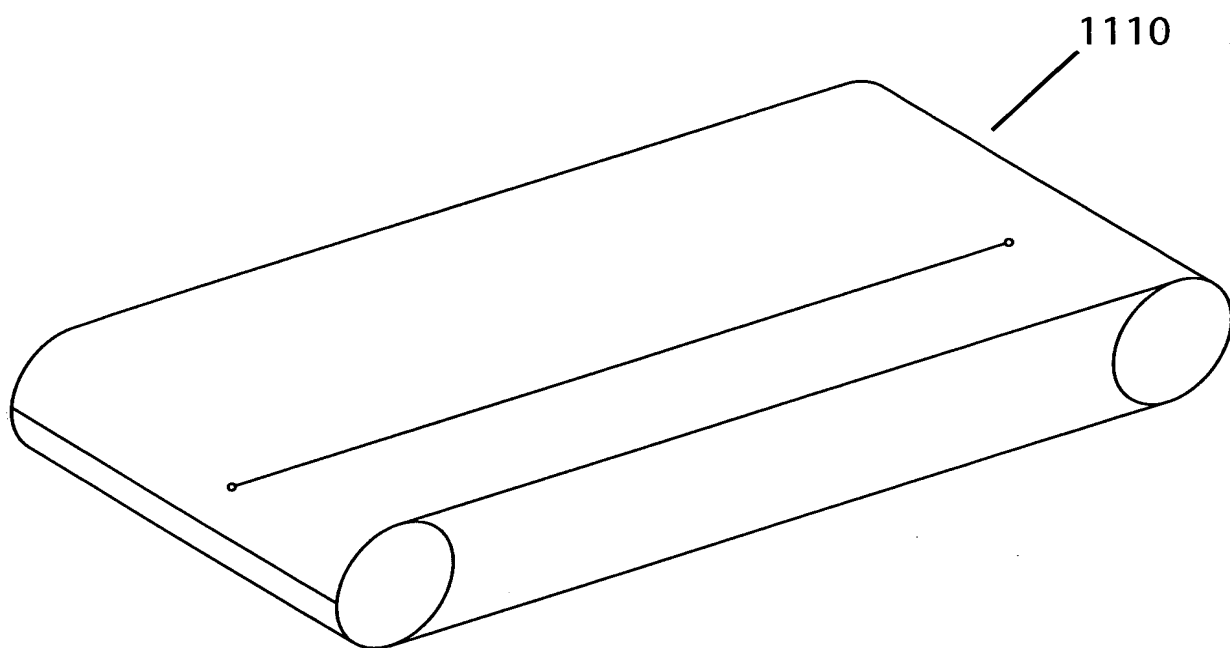


FIG. 11



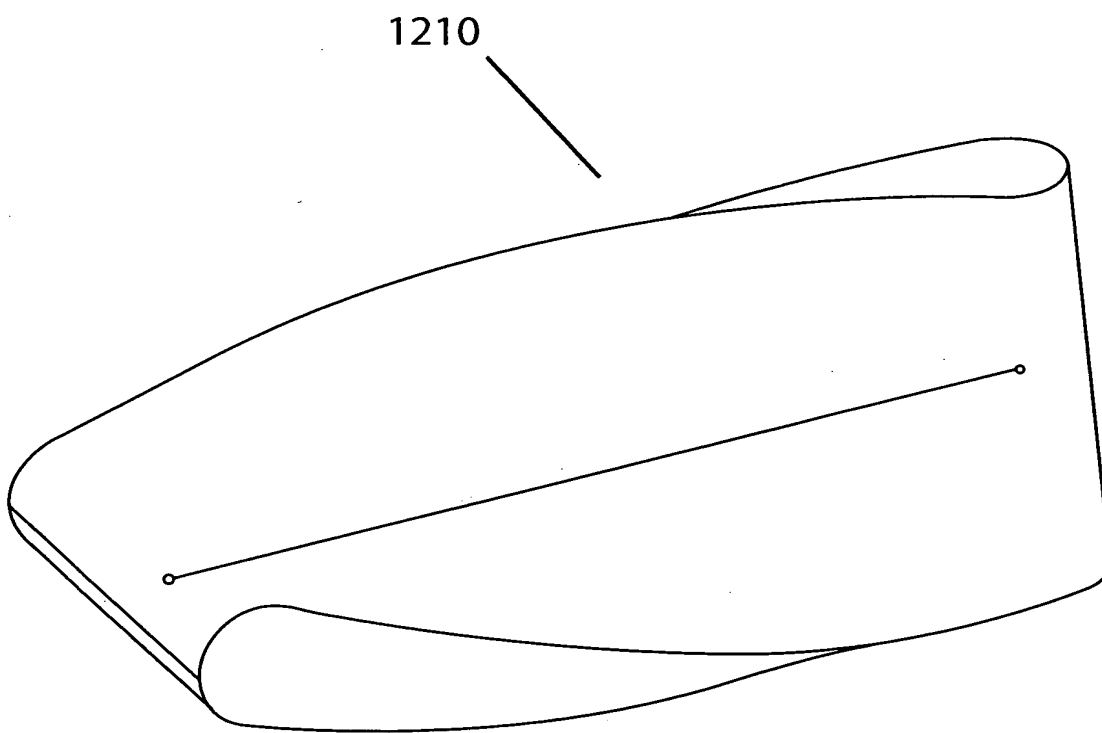


FIG. 12

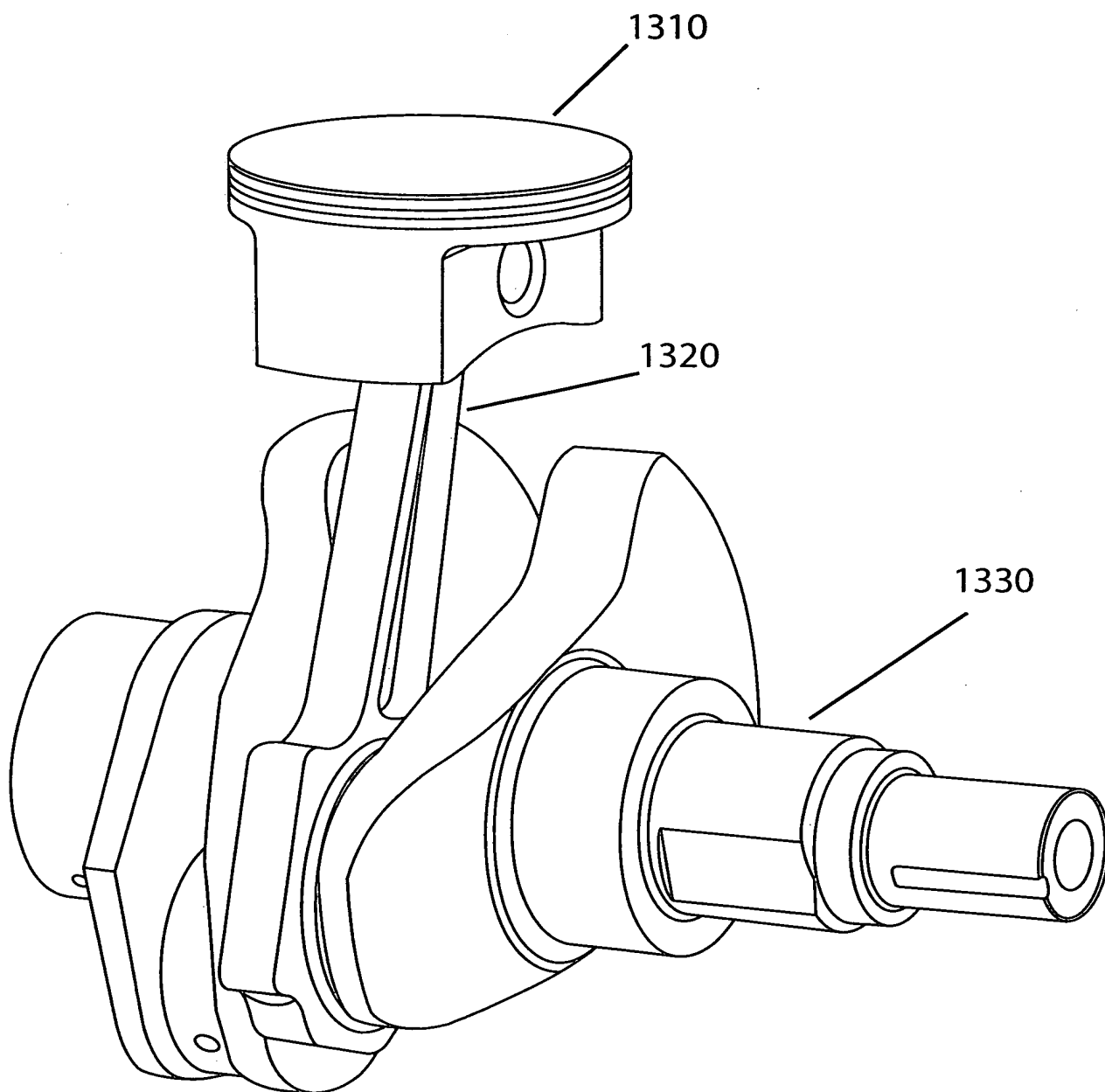


FIG. 13

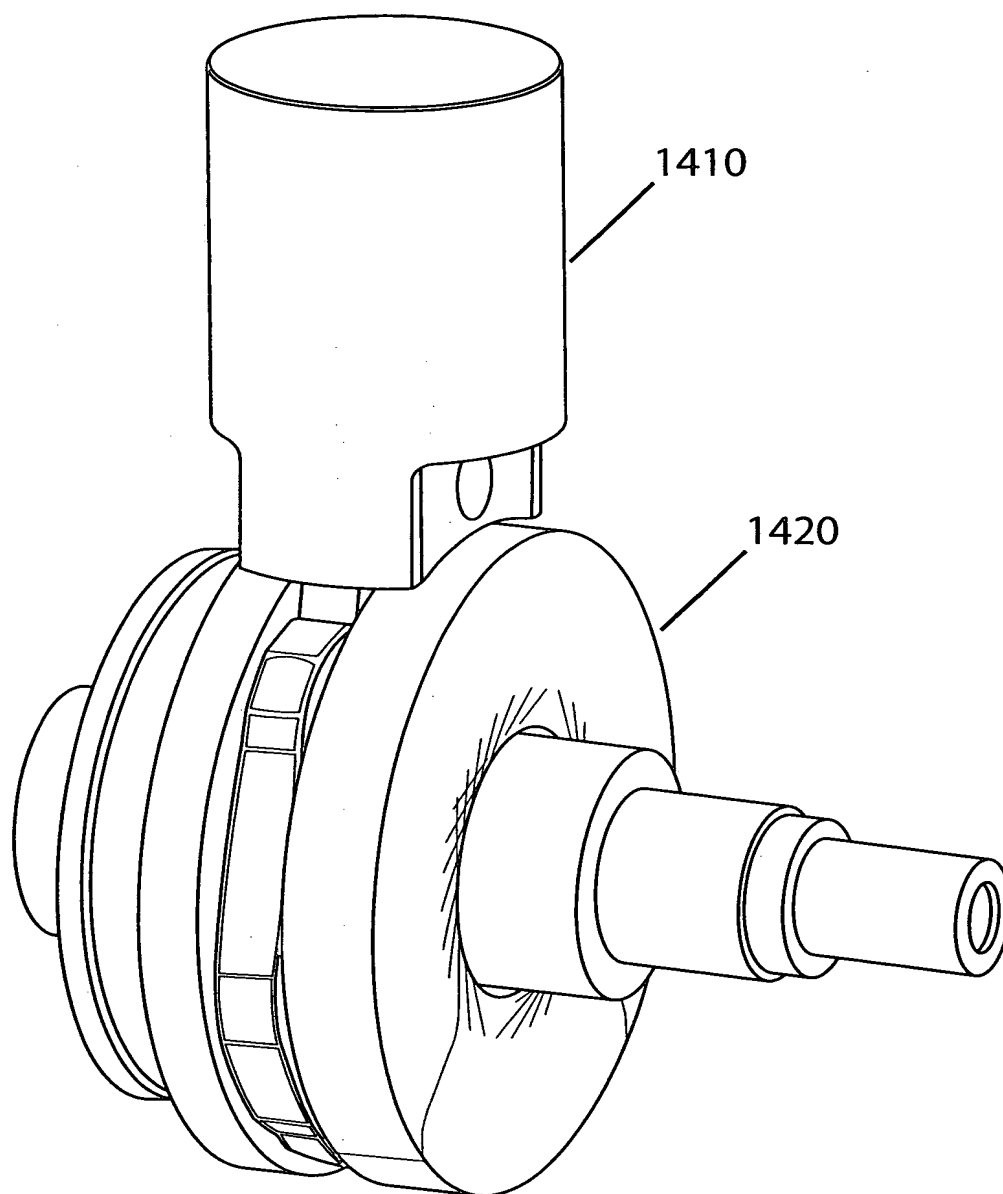


FIG. 14